

WHAT IS CLAIMED IS:

1. A system for supplying power to media converters for optical communication, wherein each media converter converts an interface of electrical-communication equipment
5 to an interface of an optical-communication device and converts the interface of the optical-communication device to the interface of the electrical-communication device, the system comprising:

a power-supply device constructed independently from the media converters; and,
at least one power-supply socket device to supply power from the power-supply
10 device to the media converters, wherein

the power-supply socket device includes input/output data interfaces for connection with the electrical-communication equipment and further includes input/output data interfaces and power-supply interfaces for connection with the media converters.

15 2. The system as claimed in claim 1, wherein the power-supply socket device further comprises:

a main power-supply socket device for directly receiving power from the power supply device;

at least one dependent power-supply socket device for receiving the power from the
20 main power-supply socket device; and,

at least one conductor interface for connecting a dependent power-supply socket device to the main power-supply socket device.

3. The system as claimed in claim 2, wherein the at least one conductor interface alternatively connects a dependent power-supply socket device to another dependent power-supply socket device.

5 4. The system as claimed in claim 1, further comprising a fuse interposed between the conductor interfaces to prevent the conductor interfaces from a short circuit.

5. The system as claimed in claim 1, wherein the electrical-communication equipment further includes additional interfaces that accommodate additional interface
10 devices.

6. The system as claimed in claim 1, wherein the electrical-communication equipment transmits electrical signals to and from media converters through copper wire.

15 7. The system as claimed in claim 1, wherein the power-supply socket devices transmit power to the media converters through copper wire.

8. The system as claimed in claim 1, wherein the media converters transmit optical data between one another through optical fiber.

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9. The system as claimed in claim 1, wherein the media converters comprise an

amplifier, a laser diode, and a photodiode.

10. A method for supplying power to media converters for optical communication, wherein each media converter converts an interface of electrical-communication equipment
5 to an interface of an optical-communication device and converts the interface of the optical-communication device to the interface of the electrical-communication device, the method comprising the steps of:

providing a power-supply device constructed independently from the media converters; and,

10 providing at least one power-supply socket device to supply power from the power-supply device to the media converters.

11. The method as claimed in claim 10, wherein the step of providing a power-supply socket device further includes the step of providing a power-supply socket device
15 including input/output data interfaces for connection with the electrical-communication equipment and input/output data interfaces and power-supply interfaces for connection with the media converters.

12. The method as claimed in claim 11, wherein the step of providing a power-
20 supply socket device further comprises the steps of:

providing a main power-supply socket device for directly receiving power from the power-supply device;

providing at least one dependent power-supply socket device for receiving the power from the main power-supply socket device; and,

providing at least one conductor interface for connecting a dependent power-supply socket device to the main power-supply socket device or for connecting one dependent
5 power-supply socket device to another dependent power-supply socket device.